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ABSTRACT

A comprehensive investigation was conducted of the impact of the financial reductions that occurred during the 1979-81 and 1981-83 bienniums on the Washington state community college system. Data were obtained for fall quarters 1979 and 1982 to determine if there were significant differences between variables encompassing employee staffing levels, numbers of course sections, vocational and academic full-time equivalent (FTE) enrollment, vocational and academic headcount, time and location of course offerings, student-faculty ratios, and student characteristics. Study findings, based on comparisons of fall 1979 and fall 1982 data for all 27 community colleges in Washington, included the following: (1) the total mean staffing level fell from a high of 247.70 FTE staff members to 217.44; (2) reductions were found in the number of transfer, general education, vocational, and home and family courses offered; (3) while significant increases in academic FTE enrollment occurred in math courses, decreases were seen in humanities, and public health and physical education courses; (4) significant increases in vocational FTE enrollment occurred in data processing, while decreases were seen in business and commerce, mechanical engineering, home and natural science, public service, and occupational support; (5) a mean increase of 3.45 FTE students was observed in the total academic student-faculty ratio; (6) part-time student status showed a significant mean reduction; and (7) Black and Indian American headcount decreased significantly. (MPH)

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THE CONSEQUENCES OF FINANCIAL RETRENCHMENT: AN IMPACT STUDY IN WASHINGTON STATE

A paper presented at

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of the
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As a point of departure, we reviewed over one hundred articles related to the impact of financial reductions on (a) missions, (b) employee staffing levels, (c) numbers of course sections, (d) FTE enrollment, (e) headcount, (f) time and location of course offerings, (g) student-faculty ratios, and (h) student characteristics of the community college population.

The review indicated that, as a result of financial reductions, community colleges examined existing missions and were forced to narrow the access of students to the institution. The open door philosophy was reviewed to determine the breadth of service that could be continued. Colleges that were faced with financial reductions changed by reduction and substitution. Limited funds forced colleges to become less comprehensive. The mission and goals and objectives of community colleges became more clearly delineated. Legislatures had at their disposal the capacity to influence the direction of community colleges. Financial retrenchment had a downward spiraling effect on courses offered, enrollment, and image. In general, colleges did not change their fundamental missions but reduced the depth and breadth of missions as an adjustment to financial reductions.

Community colleges attempted, unsuccessfully in most cases, to avoid staffing reductions. When staffing reductions were necessary, the greatest impact was on the part-time faculty. In general, the financial reductions that occurred since 1978 forced few terminations of full-time tenured faculty. Personnel cuts were accomplished by retirements, unfilled vacancies, and part-time staff reductions. Full-time administrative personnel were impacted more than full-time faculty. Support areas outside the instructional faculty were more vulnerable to staff reductions.

As an aftermath of financial reductions, colleges had fewer course sections often offered at different times and locations. In general, avocational and recreational course sections were impacted first. Evening sections and off-campus sections were deleted in lieu of day-on-campus sections. Summer and adult education course sections were often cancelled for budgetary reasons. In general, non-credit courses fared far worse than credit courses in terms of course reductions. Course reductions were impacted in some cases by the college's perceived need to remain comprehensive.

The financial reductions of the late 70s and early 80s resulted in a slowed or reduced rate of community college enrollment growth. In most cases, enrollment

reductions were a direct result of financial reductions. Underfunding was perceived as a threat to student access, equity, and comprehensiveness of course offerings.

A relationship developed between budget reduction and a change in the time and location of community college class or program offerings. An initial response to financial threat was the elimination of summer school. The termination of part-time non-tenured faculty reduced the flexibility of times and locations classes could be distributed throughout a community college schedule.

Community colleges responded to financial stress, in most cases, by increasing the size of the student-faculty ratio. Colleges attempted to retain comprehensiveness by increasing class size and consolidation rather than curtailing or eliminating entire programs. Increasing the faculty-student ratio was an accepted and consistent practice for colleges faced with financial exigencies.

The community college student characteristics were susceptible to funding patterns. Financial reductions impacted community college students because of a wide variation in age, race, academic ability, affluence, and interests. Low income students were vulnerable to funding reductions. Minority groups were seeking a community college education in increasing numbers.

Financial reductions were predicted to impact the part-time student who rely heavily on occupationally related courses. In general, funding reductions most impacted those students affected by age, race, sex, or economic disadvantages.

The literature review was conducted to serve two purposes: (a) to determine the impact of fiscal restrictions on the mission of community colleges and (b) to determine if fiscal restrictions impacted variables encompassing employee staffing levels, numbers of course sections, full-time equivalent and headcount enrollments, time and location of offerings, student-faculty ratios, and student characteristics. The need for an impact study that provides statistical data was needed. The literature identified concerns and projected problems, but further study was needed to determine measurable outcomes of those concerns and projected problems.

The purpose of this study was to do a comprehensive investigation of the impact of the financial reductions that occurred during the 1979-81 and 1981-83 bienniums on the Washington state community college system. Data were obtained for fall quarter 1979 and fall quarter 1982 to determine if there were significant differences between variables encompassing (a) employee staffing levels, (b) numbers of course sections, (c) vocational and academic

full-time equivalent (FTE) enrollment, (d) vocational and academic headcount, (e) time and location of course offerings, (f) student-faculty ratios, and (g) student characteristics of the community college population.

We are presenting the results of the data analysis in response to nine research questions in order to determine the significance of the impact of the financial condition after decision makers had directly applied budgetary reductions of appropriated funds undertaken as a direct result of action initiated by the State Board for Community College Education, the Office of Financial Management, and the Governor's office.

Population of the Study

Data were available for all 27 colleges in the Washington state community college system. The research sample included 27 individual community colleges which had submitted data to the SBCCE Management Information System (MIS). Sources of data included the SBCCE MIS:2 Course Effort reports, the SBCCE MIS:1 Student Enrollment reports, the SBCCE MIS:6 Professional Personnel reports, and the SBCCE MIS:7 Classified Personnel reports.

Research Question 1

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact system-wide employee staffing levels in the classified, exempt, and full-time and part-time FTE-faculty?

For Washington state community college MIS-6 (professional personnel) reporting purposes, employees are divided into three categories: (a) faculty, (b) classified, and (c) exempt. In this study, full-time faculty was defined as those employees employed on 9- and 10-month contracts. The classified staffing level was composed of those employees covered under the Washington State Higher Education Personnel Board. Exempt employees were contracted on an 11- or 12-month basis and were not subject to Washington State Higher Education Personnel Board requirements. Part-time faculty are considered hourly employees. Part-time faculty were those remunerated on the basis of a college part-time salary schedule.

Each of the three staffing levels was compared using data gathered in the 1979 and 1982 fall quarters. The results are presented in Table 4,

providing results of t-tests comparing 1979 data to 1982 data.

Table 4
t-TESTS FOR COMPARISON OF
STATE-SUPPORTED EMPLOYEE STAFFING LEVELS
FOR FALL QUARTERS 1979 AND 1982

Employee Classification	M (1979) Pre-reduction	SD	M (1982) Pre-reduction	SD	t
FACULTY					
Full-time	90.33	40.50	85.11	38.28	-3.28*
Part-time	60.11	29.80	40.52	22.51	-7.97*
CLASSIFIED	78.59	28.80	75.37	28.97	-1.94
EXEMPT	18.67	6.05	16.44	4.74	-1.94
TOTAL	247.70	88.86	217.44	82.24	-8.86*

*p .01
Sources: SBCCE MIS-6:#35260C45, MIS-6:IM6051, MIS-7:IM7051

As expected, the part-time faculty staffing level results revealed the largest mean difference of 19.59. A significant difference was found after the financial reduction process occurred between the means of both the full-time and part-time faculty staffing levels at the .01 level. Both the classified and exempt staffing levels indicated reductions, however the t-test analysis did not indicate the reduction was significant at .01 or .05 level.

The results indicated that all four Washington

state community college staffing levels were reduced by 1979-81 and 1981-83 biennial financial reductions, but only the faculty category in both the part-time and full-time classifications were significantly impacted at the .01 level.

The total mean staffing level fell from a high of 247.70 FTE staff members in 1979 to 217.44 FTE staff members in 1982. The t-test results for comparison of the total state-supported employee staffing levels in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 2

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact the number of course sections offered in the academic program (transfer, basic education, and general education) and the vocational program (vocational and home and family)?

The information presented in Table 5 compares five major areas of Washington's community college instructional program. The results indicated that the transfer course sections which provide the first two years of a baccalaureate program enabling students to transfer to four-year colleges were reduced significantly.

Table 5
t-TESTS FOR COMPARISON OF STATE-SUPPORTED ACADEMIC AND VOCATIONAL COURSE SECTIONS FOR FALL QUARTERS 1979 AND 1982

Number of Course Sections	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
ACADEMIC					
Transfer	321.15	133.47	259.85	103.92	-6.09*
Basic Ed	71.48	49.38	63.85	36.90	-1.12
General Ed	29.56	30.95	11.78	16.88	-3.60*
Academic Total	422.19	175.58	335.48	118.83	-5.41*
VOCATIONAL					
Vocational	379.52	177.53	279.59	130.401	-7.21*
Home & Family	62.70	42.12	29.70	19.80	-5.53*
Vocational Total	442.22	189.19	309.29	131.09	-8.17*
TOTAL COURSE SECTIONS	864.41	281.24	664.78	213.15	-12.32*

*p .01
Source: SBCCE MIS-2:IM2055

A significant difference was found after the reduction process occurred between number of course sections offered in general education courses that deal

with psychological, social, political, and economic subjects intended to provide for an informed citizenry. The means of 1979 and 1982 basic education course sections in basic knowledge or skill areas as needed to prepare for college level courses, adult basic education, or high school completion differed, but not significantly at the .01 level.

The financial reduction process impacted the number of vocational course sections which provide instruction related to over 300 occupational fields. The means of the number of course sections offered in the home and family instruction unit covering basic parenting and home living skills revealed a significant reduction.

The results indicated that four of the five major areas of the Washington community college instructional program were impacted at the .01 level of significance. The t-test results for comparison of the total number of state-supported academic and vocational course sections in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 3

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact system-wide academic enrollments in instructional subject areas (business administration, science, mathematics, social sciences, humanities, health and physical education, and basic skills)?

The results presented in Table 6 compare seven cluster areas of the Washington state academic instructional program. Academic courses are taught primarily for students whose goal is general education or transfer to a four-year institution.

Two instructional subject areas, science and math, show an increased growth in FTEs between 1979 and 1982 fall quarters. The math mean increase was significant at the .01 level.

A significant difference was found in the FTE decline for the humanities and health and P.E. areas at the .01 level between fall quarter 1979 and fall quarter 1982.

Table 6
t-TESTS FOR COMPARISON OF STATE-SUPPORTED
ACADEMIC FTE STUDENTS
FOR FALL QUARTERS 1979 AND 1982

Instructional Subject Areas	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Business Administration	108.63	74.75	97.67	74.17	-2.08**
Science	213.52	118.35	224.22	118.85	1.18
Math	164.93	95.46	199.48	110.56	3.66*
Social Science	328.41	191.43	330.15	118.07	.15
Humanities	530.74	297.08	460.63	235.96	-3.71*
Health & P.E.	119.48	76.31	75.96	46.24	-5.24*
Basic Skills	324.07	318.37	287.93	306.28	-1.21
TOTAL ACADEMIC	1789.89	975.14	1676.04	902.15	-2.52**

*p .01
**p .05
Source: SBCCE MIS-2:03, MIS-20A, MIS-2:IM2060, MIS:IM2052

The mean of the seven total academic areas shows a mean difference reduction of 113.85 FTEs which is significant at the .05 level. The t-test results for comparison of the total number of state-supported academic FTE-students in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction at the .05 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 4

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact system-wide vocational enrollments in instructional subject areas (business and commerce, data processing, health services, mechanical and engineering, home and natural sciences, public services, and occupational support)?

The vocational program in the Washington state community college system is composed of the technical and occupational courses leading to an associate degree and certificates below the baccalaureate level. Vocational courses provide training to prepare persons for new jobs or to upgrade the skills of those presently employed.

In Table 7, a comparison of the means of the 27 community college FTE enrollment levels revealed significant declines at the .01 level of significance for business and commerce, mechanical engineering, home and natural science, public service and occupational support. The data processing FTE growth from fall quarter 1979 to fall quarter 1982 was significant at the .01 level.

Table 7
t-TESTS FOR COMPARISON OF STATE-SUPPORTED
VOCATIONAL FTE STUDENTS
FOR FALL QUARTERS 1979 AND 1982

Instructional Subject Areas	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Business/Commerce	451.33	263.71	337.59	195.08	-5.69*
Data Processing	45.30	51.39	73.74	61.92	5.97*
Health Services	143.33	100.01	135.33	97.37	-1.34
Mechanical & Engineering	457.37	468.17	375.89	424.20	-4.53*
Home & Natural Science	243.74	132.12	149.15	106.69	-8.84*
Public Service	95.37	84.79	67.04	53.35	-2.96*
Occupational Support	233.63	174.32	147.40	107.62	-4.86*
TOTAL VOCATIONAL	1670.00	936.83	1286.15	758.90	-2.72**

*p .01
**p .05
Source: SBCCE MIS-2:03, MIS-2:0A, MIS-2:IM2060, MIS-2:IM2052

The growth in the data processing FTE level did not offset the general FTE decline in other vocational programs. The t-test results for comparison of the total number of state-supported vocational FTE-students in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction at the .05 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 5

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact student headcount enrollment in the academic program (transfer, basic education, and general education) and the vocational program (vocational and home and family)?

Academic and vocational instruction in Washington's community colleges is generally offered in five basic areas: (a) transfer, (b) basic skills, (c) general education, (d) vocational, and (e) home and family. The results presented in Table 8 indicated minimal change in the student headcount enrollment in the transfer program which provides the first two years of a baccalaureate program.

In the basic skills area, students prepare for college level courses, complete high school, or enroll in adult basic education. No significant difference could be observed in the results of the basic skills statistical analysis. In the area of general education courses dealing with psychological, social, political, and economic subjects, a significant decrease occurred in the means from 1979 to 1982 which

was statistically significant at the .01 level.

Table 8
t-TESTS FOR COMPARISON OF STATE-SUPPORTED STUDENT HEADCOUNT IN THE ACADEMIC AND VOCATIONAL PROGRAMS FOR FALL QUARTERS 1979 AND 1982

Programs	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
ACADEMIC					
Transfer	1337.11	774.77	1392.63	746.21	.97
Basic Skills	420.89	345.71	392.44	367.97	- .81
General Education	1911.00	1212.03	612.11	557.93	-7.75*
VOCATIONAL					
Vocational	2785.41	1717.99	1826.93	1038.74	-6.07*
Home/Family	639.26	536.67	360.19	287.63	-4.27*
TOTAL	7093.67	2764.27	4584.30	1854.25	-11.11*

*p .01
**p .05
Source: SBCCE MIS-1:09, MIS-1:04, MIS-1:07, MIS-1:05, MIS:IM1020, MIS:1010, MIS:IM1018

In the vocational instructional effort related to occupational fields, leading to an associate degree or certificate, a mean difference in student headcount of 958.48 indicated a significant reduction at the .01 level of significance. The program of courses entitled home and family life, which provide basic parenting and home living skills, indicated a statistically significant reduction at the .01 level.

The Washington state community college system

experienced a loss of 2509.42 headcount students between 1979 and 1982. The t-test results for comparison of the total number of state-supported headcount students in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction at .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 6

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact the FTE-student enrollment by time/location, and course intent (academic day on campus, vocational day on campus, academic evening on campus, vocational evening on campus, and total off campus)?

Washington state community colleges generate FTEs in a variety of locations, including on-campus facilities, which are used both during the day and evening. In addition to campus-based programs, the

Washington state community college system utilizes rented or leased satellite day and evening locations.

Table 9 presents the results of the statistical analysis of the FTE-students by time/location and course intent. The off-campus category includes day and evening off-campus vocational and academic FTEs.

Table 9
t-TESTS FOR COMPARISON OF STATE-SUPPORTED FTE STUDENT ENROLLMENT BY TIME/LOCATION AND COURSE INTENT FOR FALL QUARTERS 1979 AND 1982

Status	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Academic day on campus	1233.15	730.40	1275.40	701.72	1.44
Vocational day on campus	868.44	647.59	844.00	627.99	-1.07
Academic evening on campus	290.96	200.73	212.96	144.33	-3.92*
Vocational evening on campus	334.85	179.78	169.03	110.74	-8.11*
Other times/locations	732.29	542.38	460.85	480.43	-7.92*

*p .05
Source: SBCCE MIS-2:07, MIS-2:IM2055

Significant differences were found in both the academic and vocational evening on-campus categories for FTE-students. A significant mean reduction of 271.44 was revealed in the other times/locations status for FTE-students which was significant at the .01 level.

The t-test results for comparison of the total number of FTE-student enrollment by time/location and course intent in the Washington state community college system for fall quarters 1979 and 1982 indicated system-wide reductions in the academic evening on campus time location FTEs, vocational evening on campus FTEs, and other times/location FTEs which were significant at the .01 level as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 7

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact system-wide student-faculty ratios in academic instructional subject areas, (business administration, science, mathematics, social sciences, humanities, health and physical education, and basic skills)?

Student-faculty ratios for the seven academic course clusters were determined for fall quarter 1979 and fall quarter 1982. The results of the t-test

analysis of student faculty ratios are presented in Table 10.

Six course cluster area student-faculty ratios increased. The course cluster areas of science, math, and social science showed statistical increases in the means that were significant at the .05 level. Student-faculty ratios showed gains that indicated increases at the .01 level of significance in the humanities and basic skills clusters.

Table 10
t-TESTS FOR COMPARISON OF STATE-SUPPORTED ACADEMIC STUDENT-FACULTY RATIOS FOR FALL QUARTERS 1979 AND 1982

Ratios	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Business Administration	31.61	18.84	34.64	12.40	1.25
Science	21.66	5.42	24.61	3.55	2.79*
Math	27.44	7.93	31.87	7.00	2.89*
Social Science	25.72	6.99	31.10	6.48	6.03*
Humanities	19.57	4.78	21.73	4.73	2.62**
Health/P.E.	17.39	6.06	15.54	5.86	-2.13**
Basic Skills	25.88	9.36	32.18	11.59	2.68**
TOTAL ACADEMIC	22.68	5.32	26.13	4.19	4.29*

*p .01
**p .05
Source: SBCCE MIS-2:03, MIS-2:IM2060

Unexpected results in the health and P.E. student-faculty cluster were revealed by a mean reduction of the student-faculty ratio of 1.85 which

was significant at the .01 level.

The total academic instructional student-faculty ratio increased from 22.68 in fall quarter 1979 to 26.13 in 1982. A mean increase of 3.45 FTE-students was observed in the total academic student-faculty ratio. The t-test results for comparison of state-supported academic student-faculty ratios in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide increase in student-faculty ratios at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 8

Did the financial reductions implemented throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact system-wide student-faculty ratios in vocational instructional subject areas (business and commerce, data processing, health services, mechanical and engineering, home and natural sciences, public services, and occupational support)?

For reporting purposes, Washington state community colleges provide data for seven vocational course clusters. Student-faculty ratios for the seven vocational course clusters were determined for fall quarter 1979 and fall quarter 1982. The results of the t-test analysis of student-faculty ratios are presented in Table 11.

Table 11
t-TESTS FOR COMPARISON OF STATE-SUPPORTED VOCATIONAL STUDENT-FACULTY RATIOS FOR FALL QUARTERS 1979 AND 1982

Ratios	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Business/Commerce	23.32	2.33	24.94	3.79	2.97*
Data Processing	26.35	34.25	23.74	13.16	- .48
Health Services	14.39	4.56	13.28	4.49	-1.84
Mechanical & Engineering	18.73	4.08	18.86	4.07	.17
Home & Natural Science	22.97	11.45	21.75	11.46	- .81
Public Service	20.82	5.22	20.14	6.00	- .47
Occupational Support	28.24	16.08	27.74	5.69	- .15
TOTAL VOCATIONAL	21.02	3.19	20.88	2.43	- .38

*p .01
**p .05
Source: SBCCE MIS-2:03, MIS-2:IM2060

An analysis of the data for vocational student-faculty ratios indicated a general decrease in the size of the student-faculty ratio in the following areas: (a) data processing, (b) health services, (c) home and natural sciences, (d) public service, and (e)

occupational support. The mechanical and engineering student-faculty ratio increased slightly from 18.73 to 18.86.

The t-test analysis did not reveal any changes in means that were significant at either the .01 or .05 level in data processing, health services, mechanical and engineering, home and natural sciences, public service, and occupational support.

The business and commerce student-faculty ratio rose from 23.32 in 1979 to 24.94 in 1982 showing a signficant increase at the .01 level.

The total vocational instructional student-faculty ratio decreased from 21.02 in the fall quarter of 1979 to 20.88 in the fall quarter of 1982. The t-test results for comparison of the state-supported vocational student-faculty ratios in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide decrease in student-faculty ratios which indicated nonsignificant findings as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

Research Question 9

Did the financial reductions implemented

throughout the 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums, using fall quarter 1979 as a baseline quarter in comparison to fall quarter 1982, significantly impact the student characteristics of the community college population in terms of age, age by sex, full time, part time, Asian American, Black American, American Indian, and Hispanic American?

In the Washington state community college system, a student taking 9.9 credits or less is classified as part-time. Students enrolled in 10.0 credits or more are reported as full-time. Table 12 presents results of the analysis of part-time and full-time students.

Table 12
t-TESTS FOR COMPARISON OF STATE-SUPPORTED FULL-TIME AND PART-TIME STUDENT HEADCOUNT FOR FALL QUARTERS 1979 AND 1982

Status	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Full-time	2302.37	1215.47	2332.04	1197.67	.30
Part-time	4791.30	1836.10	2252.26	881.04	-11.12*
TOTAL HEADCOUNT	7093.67	2764.27	4584.30	1854.25	-11.11*

*p .01
**p .05
Source: SBCCE MIS-1:09, MIS-1:IM1020

The part-time student status showed a significant mean reduction of 2539.04 student headcounts at the

.01 level. Full-time student headcount levels did not change significantly.

The t-test results for comparison of the total number of state-supported headcount students in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

The results presented in Table 13 compare five male age groupings by headcount. In 1979, the highest mean headcount grouping for men was in the 30-59 category with a mean score of 937.07. By 1982, the mean of the 30-59 age group had declined to 504.44 with a mean difference reduction of 432.69. The 17-20 year old male mean score was 694.30 in 1979, but by 1982, the mean score had declined to 608.08 with a mean difference of 86.0.

The t-test results for comparison of age groupings of men enrolled in academic and vocational education by headcount in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction in headcount for men in all age categories at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the

course of the 1979-81 and 1981-83 bienniums.

Table 13
t-TESTS FOR COMPARISON OF
AGE GROUPINGS OF MEN ENROLLED IN
ACADEMIC AND VOCATIONAL INSTRUCTION
FOR FALL QUARTERS 1979 AND 1982

Age Grouping	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
17-20	694.30	328.20	608.08	278.88	- 5.48*
21-24	514.89	257.75	402.85	213.35	- 6.62*
25-29	528.81	271.40	369.63	201.43	- 8.41*
30-59	937.07	412.80	504.44	255.94	-10.37*
60 +	56.56	31.70	30.22	24.96	- 5.60*

*p .01
**p .05
Source: SBCCE MIS-1:07, MIS-1:IM1010

The results presented in Table 14 compare the means of five female age groupings by headcount. In 1979, the highest mean headcount grouping was for women in the 30-59 year old category with a mean score of 1469.40. By 1982, the mean score of the 30-59 age group had declined to 870.85 with a mean reduction difference of 598.55. The 17-20 year old female mean score was 747.30 in 1979, but by 1982, the mean score had declined to 636.44 with a mean difference of 110.86.

Table 14
t-TESTS FOR COMPARISON OF
AGE GROUPINGS OF WOMEN ENROLLED IN
ACADEMIC AND VOCATIONAL INSTRUCTION
FOR FALL QUARTERS 1979 AND 1982

Age Grouping	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
17-20	747.30	378.62	636.44	327.49	- 6.46*
21-24	541.52	235.30	368.96	190.26	-10.52*
25-29	655.74	273.95	403.33	170.12	- 9.83*
30-59	1469.40	609.73	870.85	373.82	-10.46*
60 +	102.33	56.89	77.33	95.09	- 1.62

*p .01
**p .05
Source: SBCCE MIS-1:07, MIS-1:IM1018

The t-test results for comparison of women enrolled in academic and vocational education by headcount in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction of headcount for women in age categories 17 through 39 at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

The results presented in Table 15 compare five age groupings by student headcount. In 1979, the highest mean headcount grouping for all age groupings was in

the 30-59 year old category with a system-wide mean headcount of 2452.04. By 1982, the mean of the 30-59 age group had declined to 1391.51 representing a mean difference of 1060.52 student headcounts.

Table 15
t-TESTS FOR COMPARISON OF
AGE GROUPING OF STUDENTS ENROLLED IN
ACADEMIC AND VOCATIONAL INSTRUCTION
FOR FALL QUARTERS 1979 AND 1982

Age Grouping	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
17-20	1458.85	699.59	1254.78	594.67	- 6.57*
21-24	1070.63	480.99	779.92	395.25	- 9.78*
25-29	1202.41	530.97	781.11	359.37	-10.07*
30-59	2452.04	994.15	1391.52	579.45	-11.18*
60 +	163.30	87.59	109.11	121.56	- 2.91*

*p .01
**p .05
Source: SBCCE MIS-1:07, MIS-IM1018

The t-test results for comparison of the total number of headcount students in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide reduction in all age categories 17 through 60+ at the .01 level of significance as a result of financial reductions implemented by 27 community colleges in Washington state during the course of the 1979-81 and 1981-83 bienniums.

The results presented in Table 16 were collected from student records indicating student-reported ethnic characteristics.

Table 16
t-TESTS FOR COMPARISON OF
ETHNIC GROUP HEADCOUNT IN
ACADEMIC AND VOCATIONAL INSTRUCTION
FOR FALL QUARTERS 1979 AND 1982

Ethnic Grouping	M (1979) Pre-reduction	SD	M (1982) Post-reduction	SD	t
Asian American	145.52	140.14	267.37	355.54	2.43**
Black American	151.96	218.19	126.22	190.62	-3.00*
Indian American	96.30	62.58	68.22	43.41	-4.23*
Hispanic American	98.52	70.70	88.30	80.14	-1.19

*p .01
**p .05
Source: SBCCE MIS-1:05, MIS-1:IM1008

Black American and Indian American headcount decreased significantly from fall quarter 1979 to fall quarter 1982. The Asian American ethnic grouping shows a mean increase of 121.85 student headcount which represents a significant increase at the .05 level.

The t-test results for comparison of ethnic group headcount in academic and vocational instruction in the Washington state community college system for fall quarters 1979 and 1982 indicated a system-wide increase

in Asian American headcount at the .05 level of significance and a system-wide decrease in Black American and Indian American headcount at the .01 level of significance.

The major conclusions drawn from this study related to the 27 Washington state community college's adjustments to the 1979-81 and 1981-83 fiscal emergency were:

1. Washington community colleges made significant reductions of full-time and part-time faculty that contributed to a significant total staffing level reduction.

2. Washington community colleges made significant course section reductions that reduced offerings but maintained the basic community college comprehensive mission.

3. Washington community colleges made significant academic FTE-student reductions which impacted the mix of FTE-students within the 7 academic cluster areas.

4. Washington community colleges made significant vocational FTE-student reductions which impacted the mix of FTE-students within the 7

vocational cluster areas.

5. Washington community colleges made significant academic and vocational headcount reductions which impacted student intent enrollments in academic and vocational course intent categories.

6. Washington community colleges made significant changes in time and location of academic and vocational course sections which impacted FTE-student enrollment by time/location and student enrollment intent.

7. Washington community colleges made significant reductions in academic course sections and FTE-faculty staffing levels which created significant increases in academic student-faculty ratios.

8. Washington community colleges made significant reductions in vocational course sections and FTE-faculty staffing levels which created nonsignificant increases in vocational student-faculty ratios offset by vocational FTE-student reductions.

9. Washington community colleges made significant reductions in course sections, time and location, and FTE-faculty staffing levels which significantly impacted the total student headcount in the part-time student status classification which contributed to a significant impact on men and women age groupings, and ethnic student characteristics.

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